

*Polytrema*. For *Oculina rosea*, in the paper first mentioned, read *Stylaster sanguineus*.

I have also lately found pieces of coral-detritus rock both from Jamaica and the Mauritius, almost covered with fragments of *Polytrema miniaceum* and *Carpenteria utricularis*, mixed together indiscriminately, thus presenting respectively in their broken summits a very similar appearance, especially where each utricle of the *Carpenteria* (which is often the case) appears to have been provided with its own branched tubular prolongation.

XXV.—On a Fossil Species of *Sarcohexactinellid* Sponge allied to *Hyalonema*. By H. J. CARTER, F.R.S. &c.

ABOUT the 23rd of June last I had the pleasure to receive from Mr. James Thomson, F.G.S. &c., of Glasgow, for delineation and description, if thought desirable, a box of fossils from the Carboniferous rocks of Scotland, which "for many years" Mr. Thomson had regarded as belonging to the sponges; and among these is a fragment of rock bearing 4-5 inches of the anchoring lash of spicules respectively of two specimens of apparently the same sarcohexactinellid sponge, which Mr. Thomson views provisionally as having belonged to a "*Hyalonema*." Besides these there are other specimens of this kind mixed up with sexradiate spicules of various forms; but particularly a fragment where some of these spicules are evidently nearly *in situ*, which leaves no doubt in my mind that this was a portion of the body of a sarcohexactinellid sponge.

I had, through the great kindness of Dr. J. Millar, become possessed, about a year since, of some of these hexactinellid spicules, as well as fragments of the linear spicules, which I now find to have come from anchoring ones similar to those of the "lash" just mentioned; and these were of the same kind as those exhibited before the British Association at Glasgow last year, where they were called "*Acanthaspongia Smithii*."

The name of *Acanthaspongia siluriensis* was proposed by M'Coy for the fossil remains of a sponge in the collection of Mr. R. Griffith, F.G.S., obtained from the sandstone of Cong, county Galway; and the specimen (for there is no figure of it) is described ('Synopsis of the Silurian Foss. of Ireland,' p. 67, 1846) as consisting of "a lengthened oval mass, about two inches long and three fourths of an inch wide, of crowded

spicules, varying in length from two lines to more than half an inch," resembling "the letter X in shape, four of the rays being always very distinct and disposed in that form; but [the author continues] there also seems to have certainly been one similar ray extending upwards and another downwards from the centre, considering the other four horizontal; the rays are round and tapering, smooth and apparently hollow."

Hence there is nothing more to be learnt from this description than that the fossil was part of a hexactinellid sponge; while among the specimens sent me formerly by Dr. J. Millar, and lately by Mr. Thomson, there are the hexactinellid spicules of the body *in situ*, the long, linear anchoring spicules, in at least three specimens of the "lash" or "glass cord," *in situ*, and fragments of the fluked ends of the anchoring spicules of the same "lash" probably, but *separate*; so that in these we have distinctly all the skeleton-spicules that a hyalonematous sponge could present, excepting the flesh-spicules, which we do not expect to find here any more than in any other fossil sponge, they, from their extreme minuteness, not being able to survive the effects of fossilization. At the same time it is hardly to be conceived that, if one species of sarcohexactinellid sponges existed at this period and in this locality, there were not more; and therefore the difficulty will be to put those spicules together which originally belonged to the same species.

Thus we have the undoubted discovery of the fossilized remains of a sarcohexactinellid sponge like *Hyalonema* from the Carboniferous limestone of "Cunninghambedland, Dalry, Ayrshire," stated by Mr. Thomson to come from "the upper thin bed of limestone which is usually found in the upper sections of our lowest Carboniferous Limestone."

It is probable that both the *Acanthaspongia* of M'Coy, described in 1846, and the *Protospongia* of Salter, figured and described in 1864, were also the remains of sarcohexactinellid sponges; while those of the vitreohexactinellids have long since been known, although only just now, in the striking illustrations of Prof. K. A. Zittel, of Munich, and Mr. W. J. Sollas, of our own country, together with their descriptions respectively, brought before the public in the most elaborate, impressive, and satisfactory manner; but not until now, to my knowledge, have the fossilized remains of a sarcohexactinellid sponge been thus indisputably proved to exist, and that, too, at a period far antecedent to any of the remains of the vitreohexactinellids hitherto described.

At first, when Dr. Millar kindly sent me the "hexactinellid spicules," they appeared to me, in form and size, to be

so unlike any of the present day with which I am acquainted, that I could only liken them to calcareous forms of the arenaceous Foraminifer called *Astrorhiza*. But on receiving more of these spicules, together with their associates (chiefly the remains of encrinitic stems), I thought that they might be the pedicellariæ of some unknown fossil Echinoderm. Finally I yielded to an acknowledged authority, who stated that there was nothing among the Echinodermata, living or fossil, to be compared to them; and then I came to the conclusion that we should never know any thing more satisfactory about them until they had been found in connexion with the organism to which they originally belonged, when the receipt of Mr. J. Thomson's specimens decided the matter in the way above stated. I must observe that Dr. Millar throughout kept to the view that they were the remains of a hyalonematous sponge, as has now been proved.

Pending my being able to delineate and describe Mr. Thomson's interesting specimens, among which there are the remains too of another sponge, apparently of a different kind, I think it right to make this communication.

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XXVI.—*Description of a new Species of Batrachostomus from Central Borneo.* By Dr. F. BRÜGGEMANN.

*Batrachostomus adspersus.*

Bill strongly vaulted; hair feathers of the lores well developed, curved and remarkably rigid; forehead with a conspicuous tuft of recurved hair feathers almost as in *B. crinifrons*: wings comparatively long and pointed; fourth quill longest; fifth, sixth, third, and seventh successively a trifle shorter; second much shorter, slightly surpassed by the eighth; first nearly one inch shorter than the second: tail elongate, its feathers narrow, shortly pointed, rather obtuse at the top, the outermost pair reaching only to one third of the whole length; the next pair twice as long as the first; the following pairs forming the rounded apex: toes long, slender; nails weak, feebly curved.

Above pale greyish brown, inclining to rufous on the smaller wing-coverts and rump, everywhere most densely covered with delicate, irregular, transverse markings of a brownish black colour. Each of the feathers of the upper head, neck, and back with a small buffy-white terminal spot, and before it